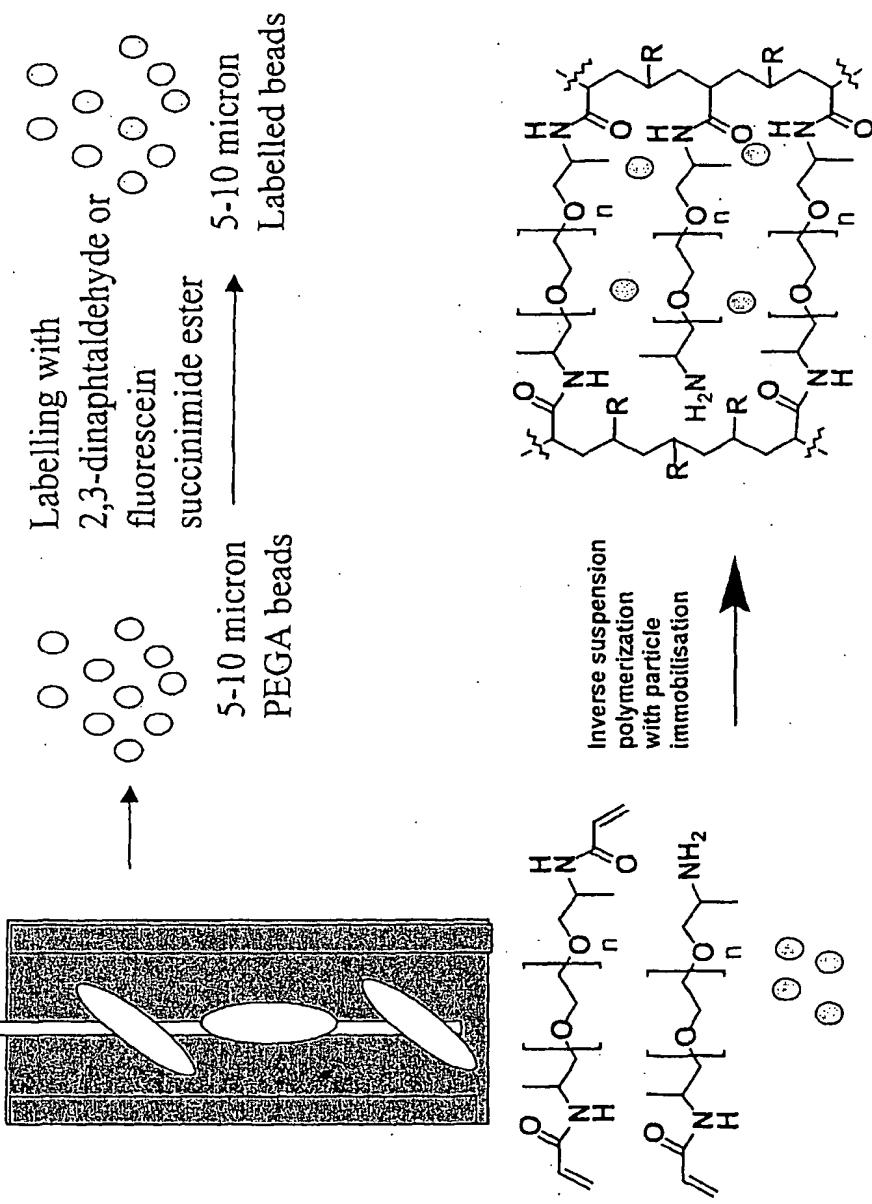


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Labelling and immobilisation of microbeads by aqueous inverse suspension polymerization

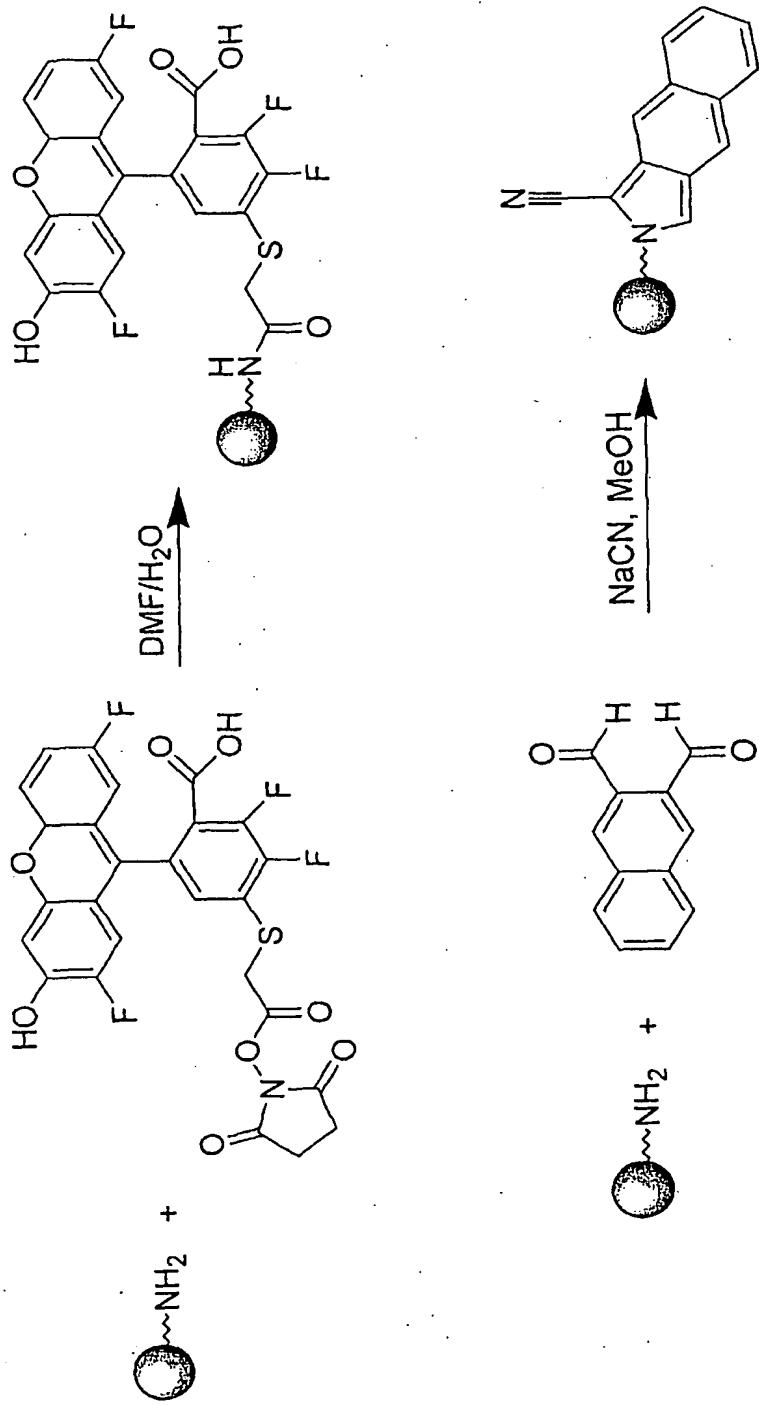
5000-
10000 rpm

Scheme 1 A

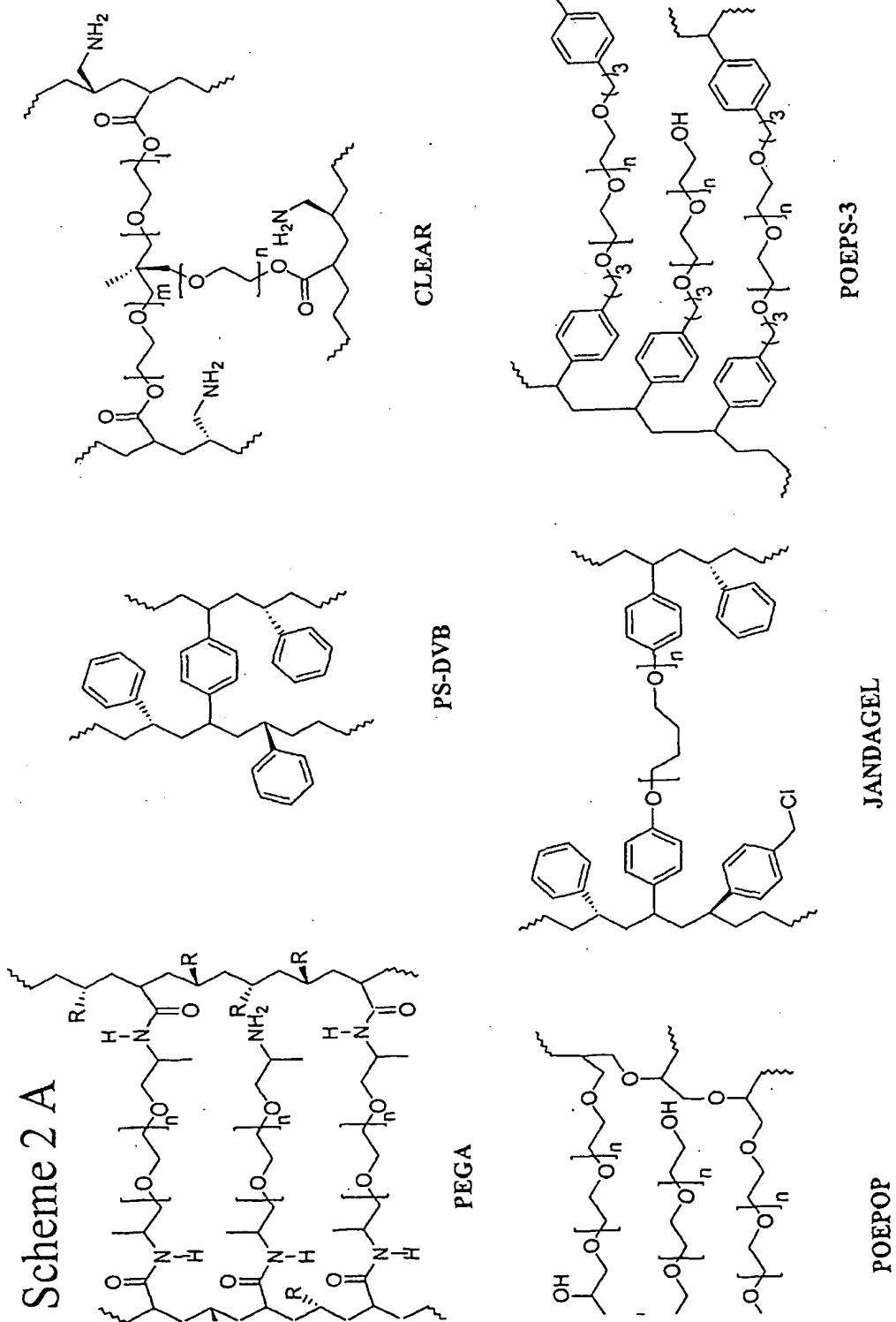


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Scheme 1 B

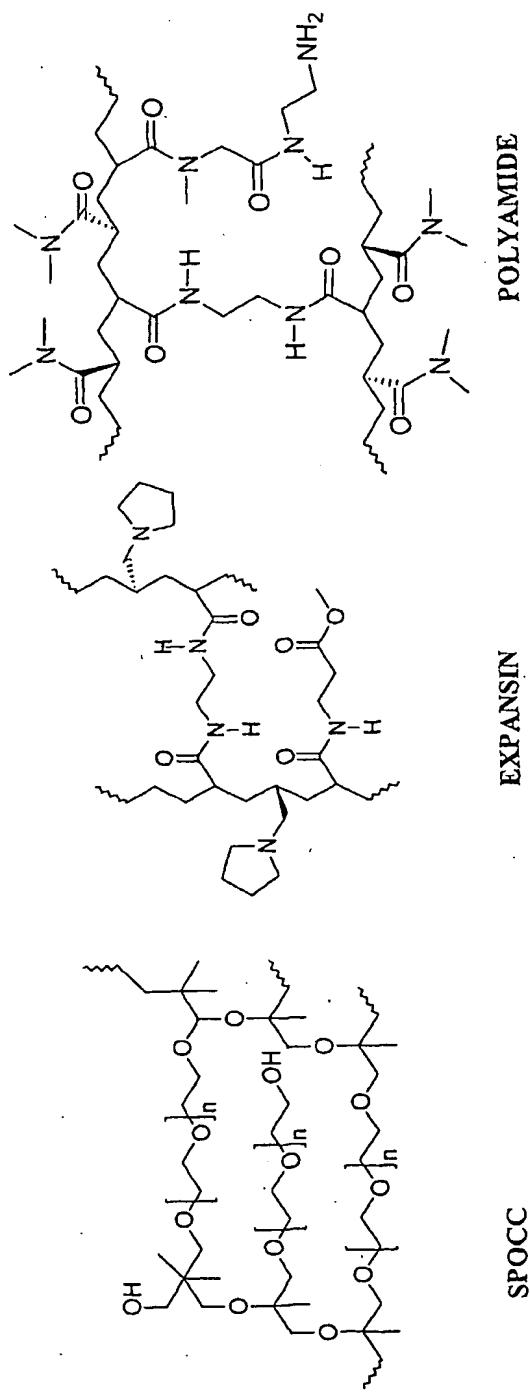


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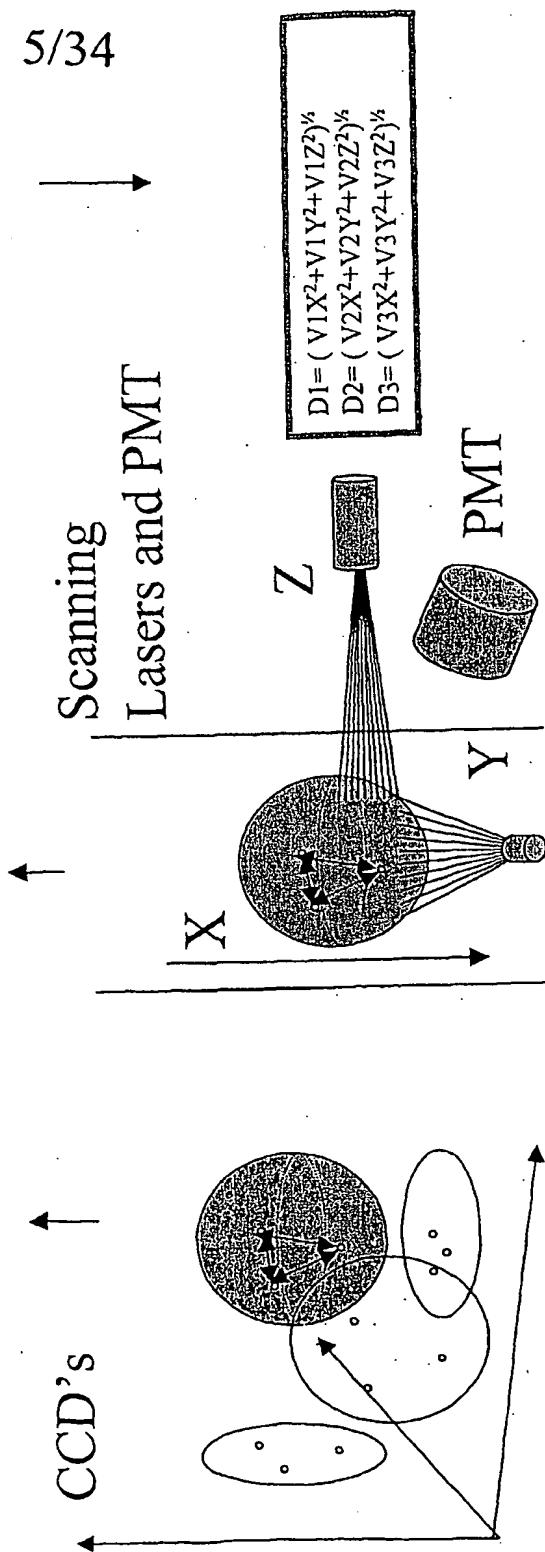
Scheme 2 B



Eig. 1

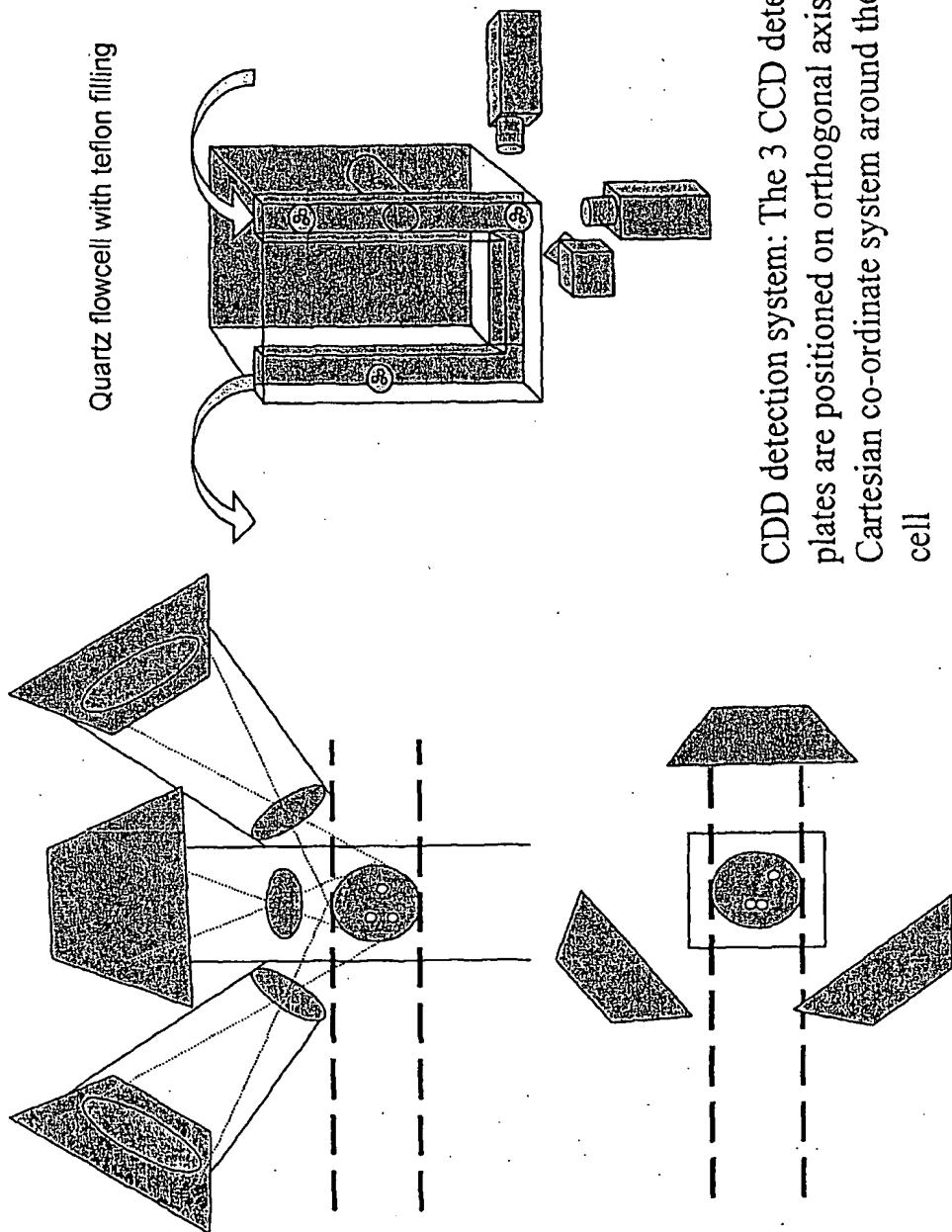
Spatial encoding of beads

$$\begin{array}{l}
 V1 = (V1X, V1Y, V1Z) = X1-X2, Y1-Y2, Z1-Z2 \\
 V2 = (V2X, V2Y, V2Z) = X1-X3, Y1-Y3, Z1-Z3 \\
 V3 = (V2X, V2Y, V2Z) = X2-X3, Y2-Y3, Z2-Z3
 \end{array}$$



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Fig. 2
CCD detection

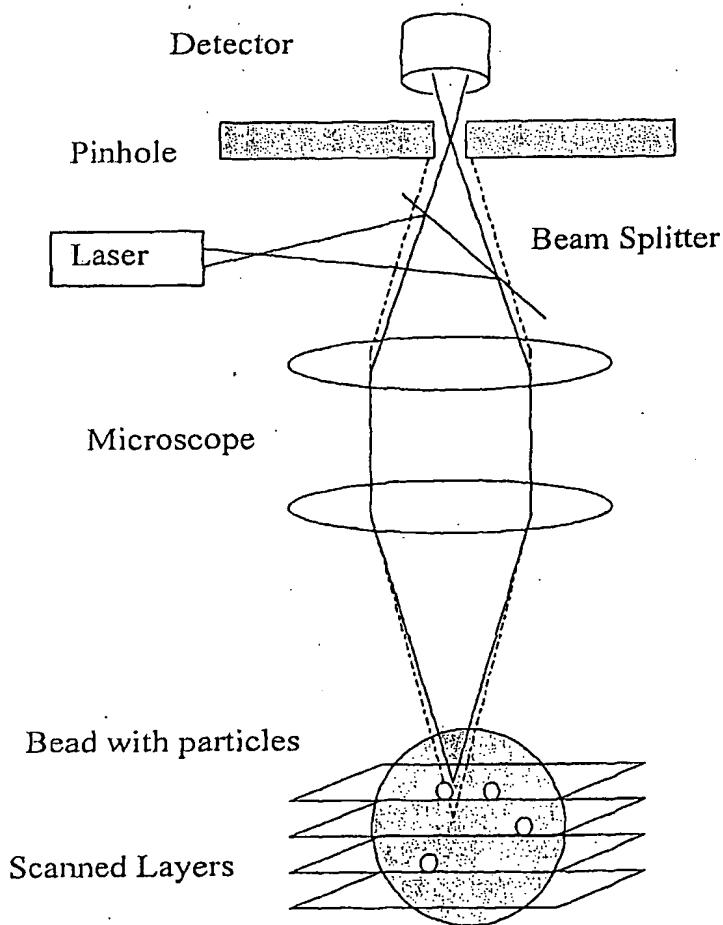


CDD detection system: The 3 CCD detector plates are positioned on orthogonal axis in Cartesian co-ordinate system around the flow cell

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Fig. 3

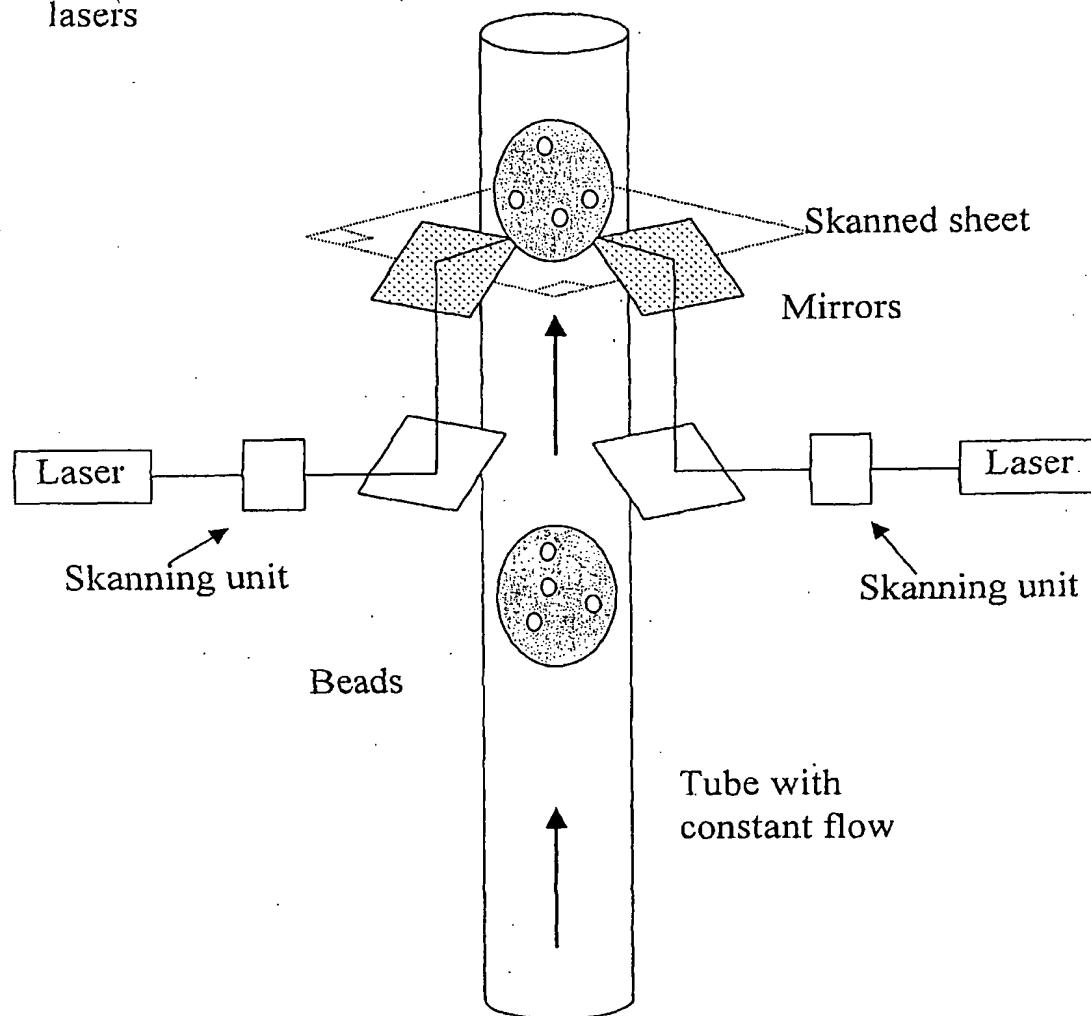
Recording of coordinates of particles in a bead using
focal or confocal microscopy



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Fig. 4

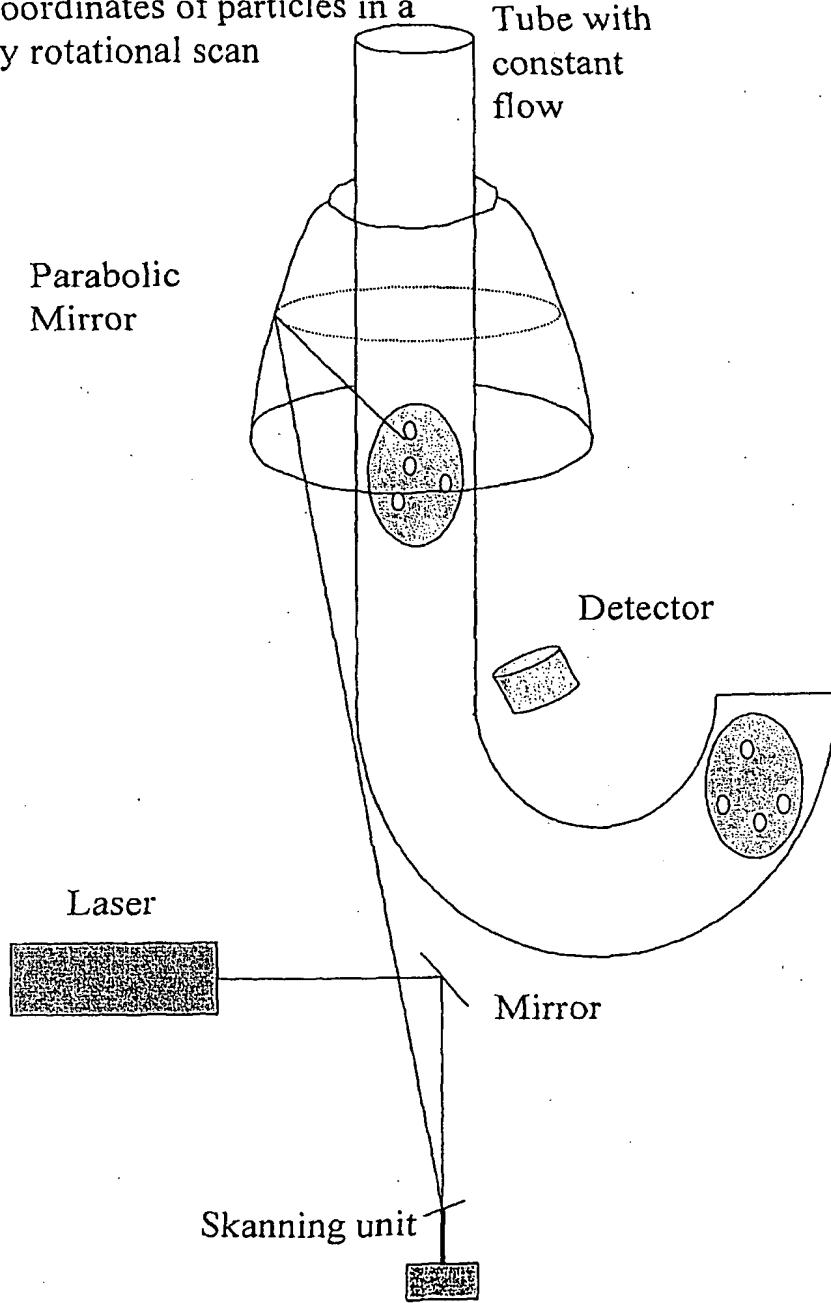
Recording of coordinates of particles in a moving bead by two alternating scanning lasers



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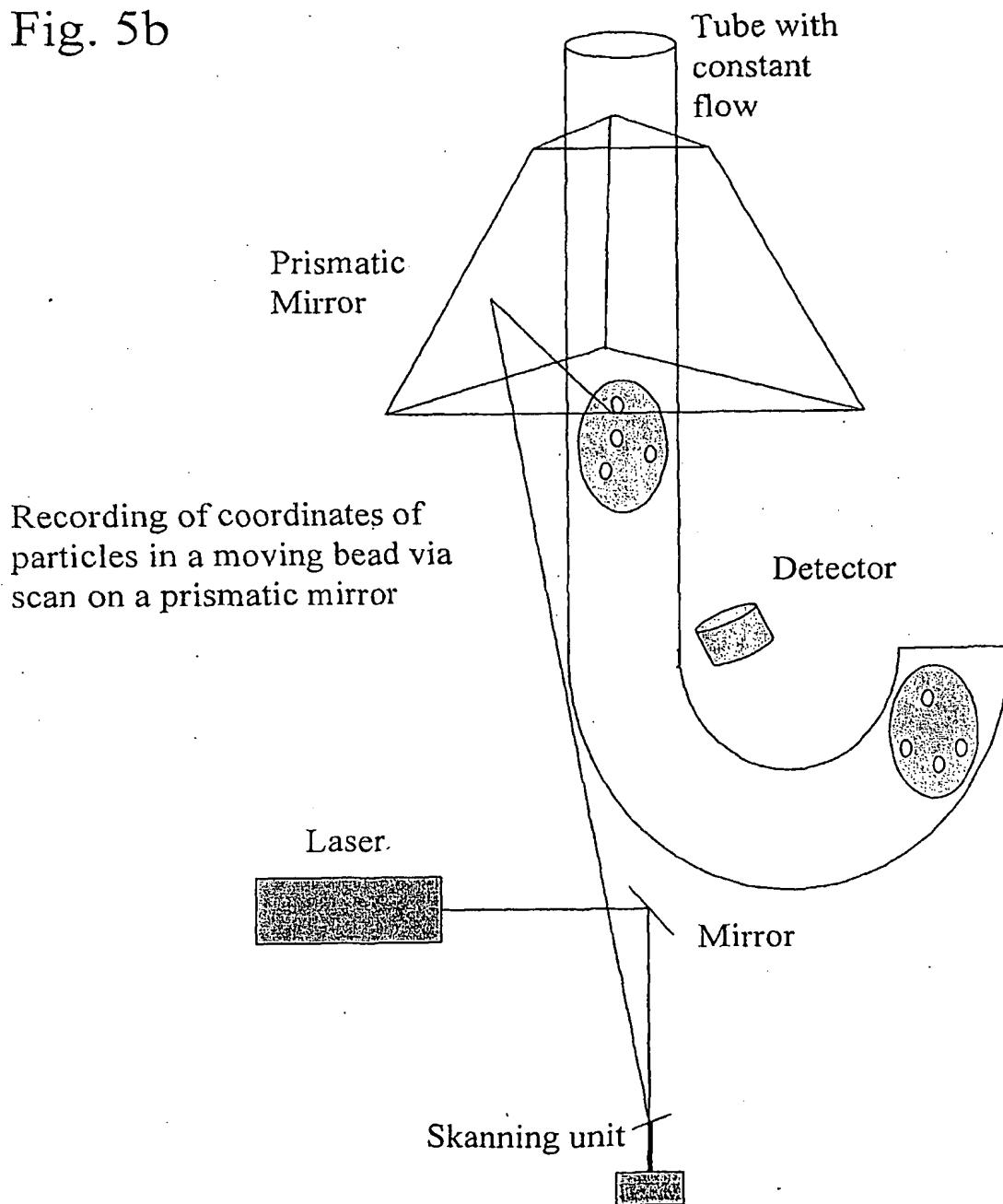
Fig. 5a

Recording of coordinates of particles in a moving bead by rotational scan

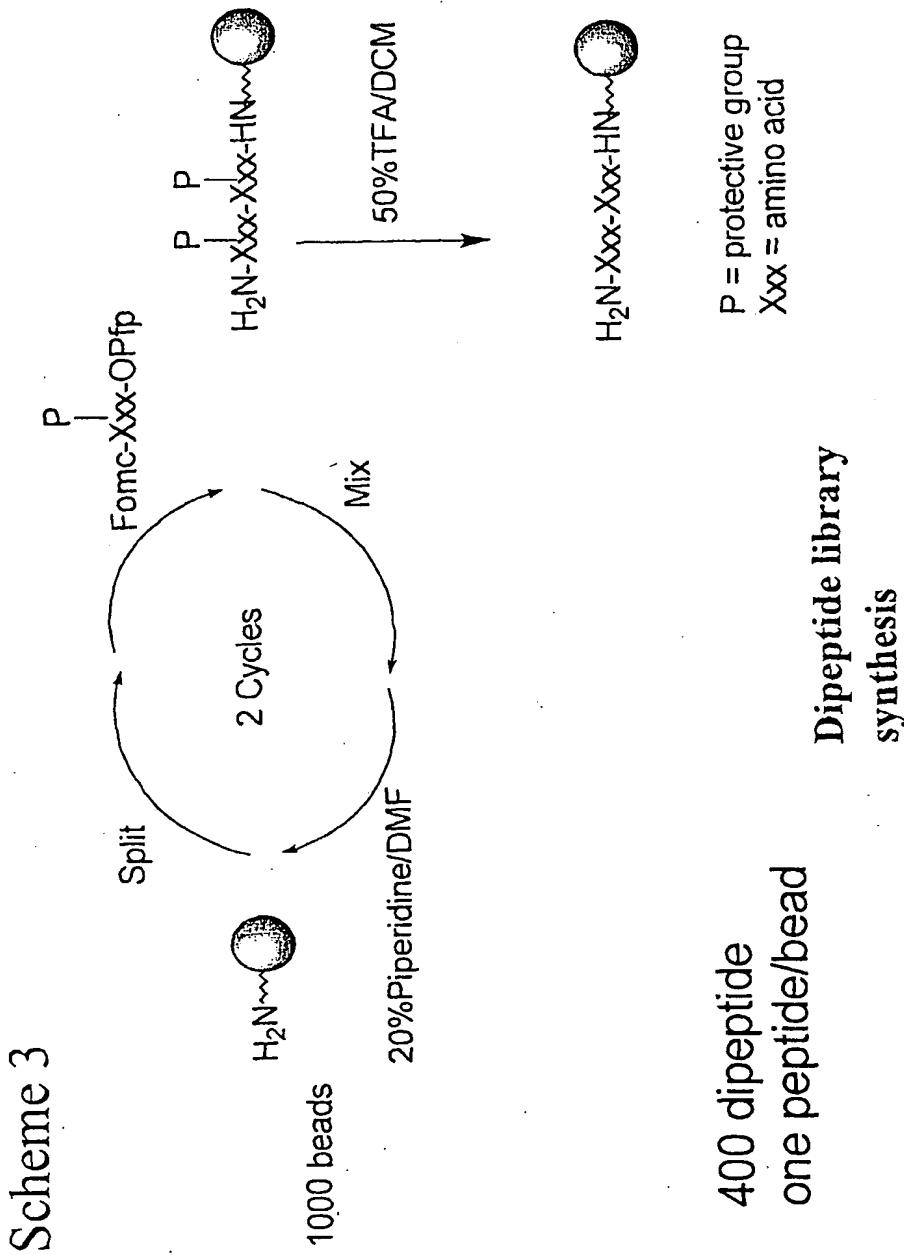


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Fig. 5b

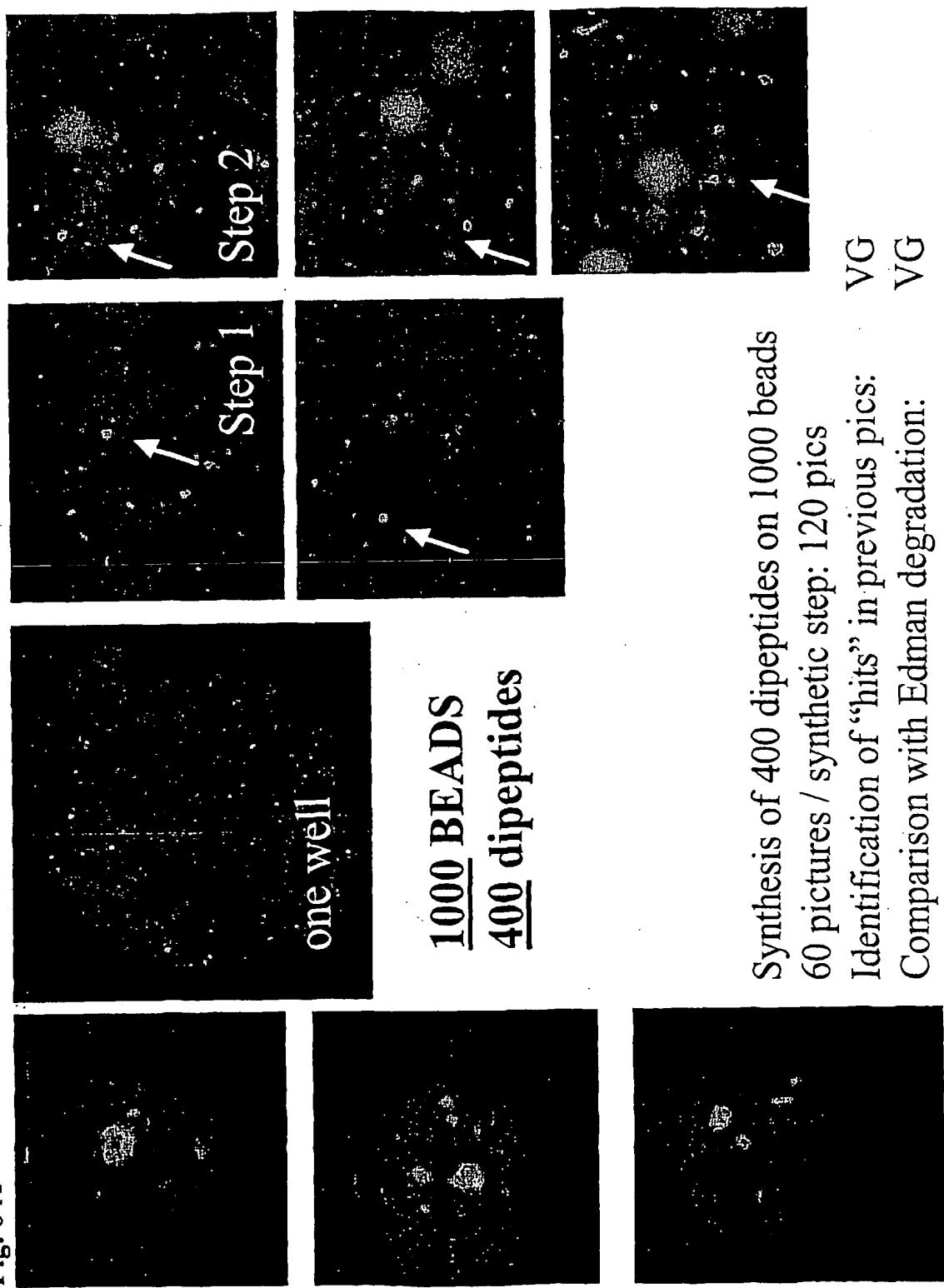


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Fig. 6 A Visual decoding of dipeptide library



Synthesis of 400 dipeptides on 1000 beads

60 pictures / synthetic step: 120 pics

Identification of "hits" in previous pics:

Comparison with Edman degradation:

VG
VG

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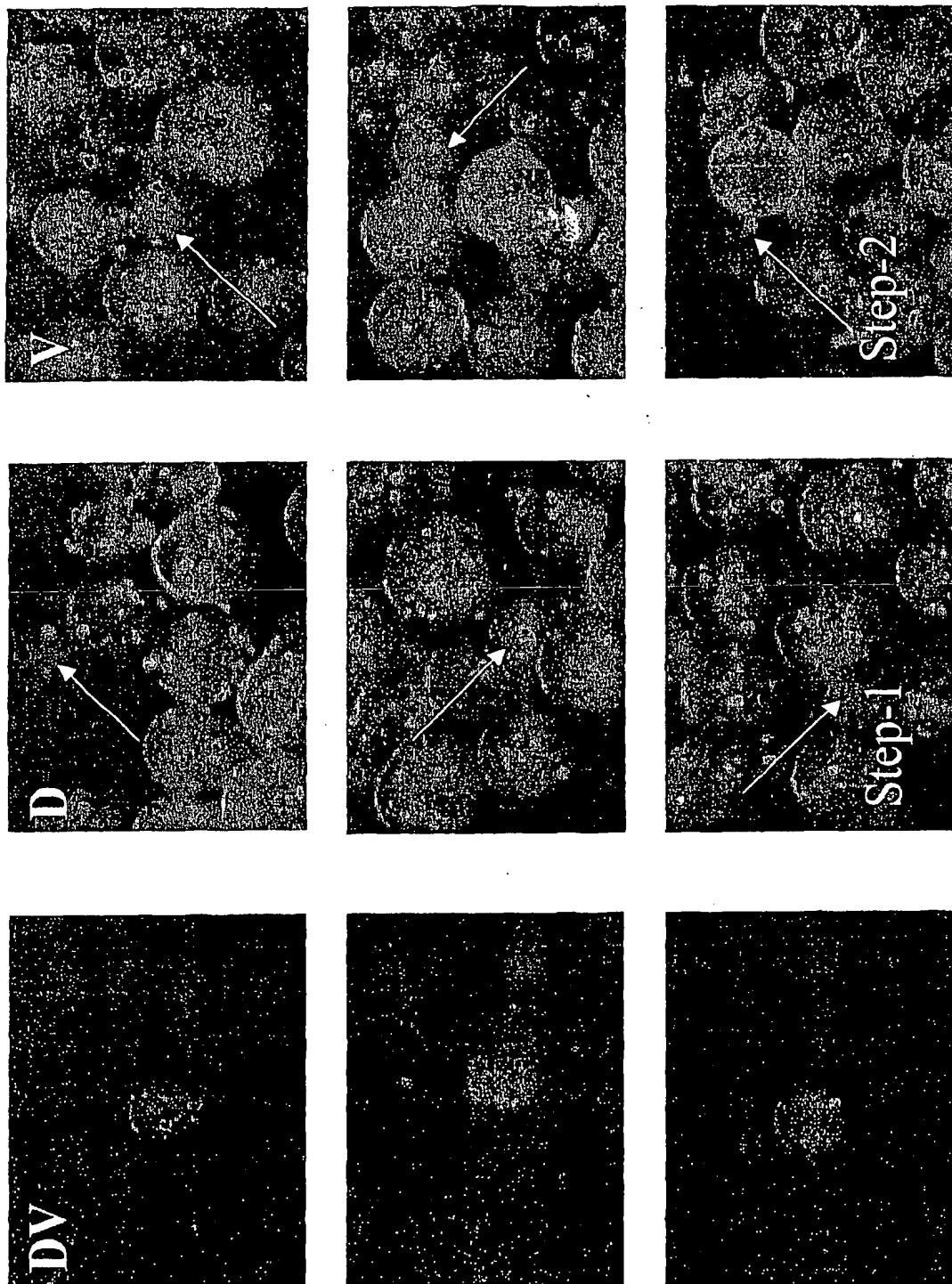


Fig. 6 B

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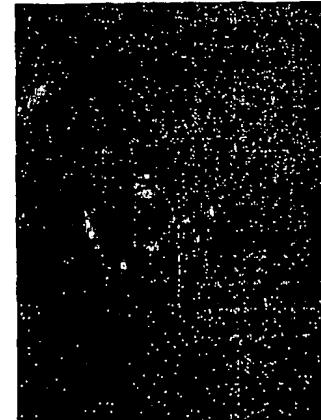
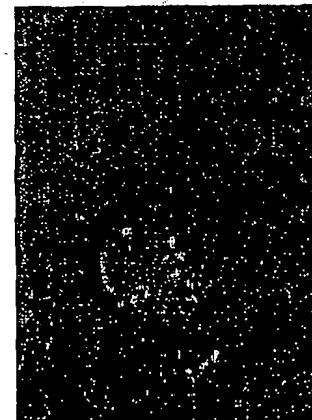
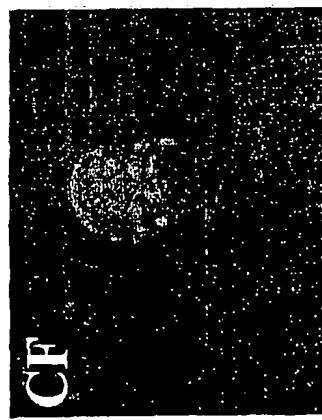
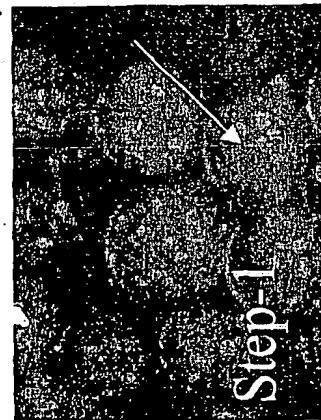
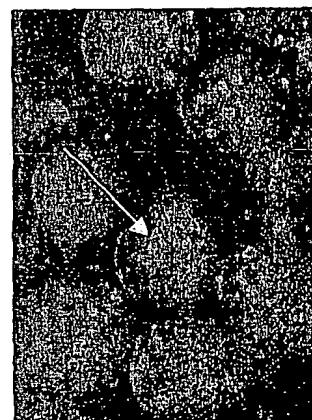
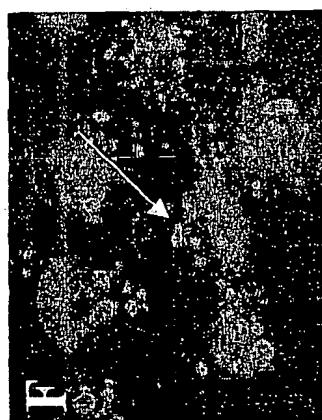
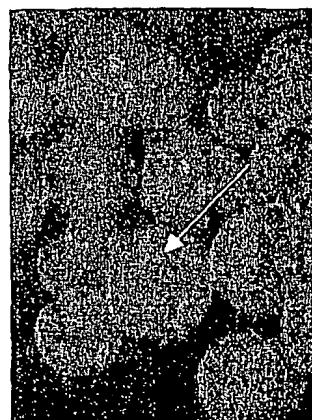
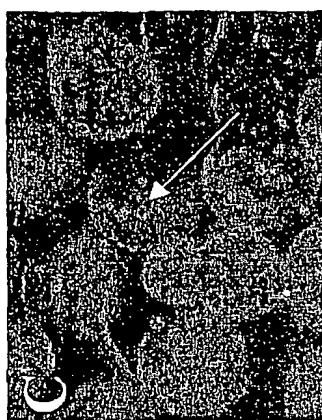


Fig. 6 C CF

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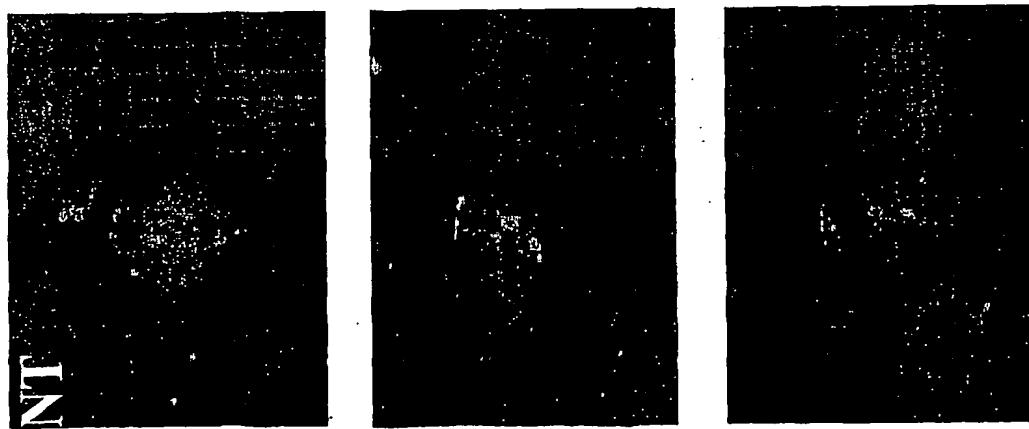
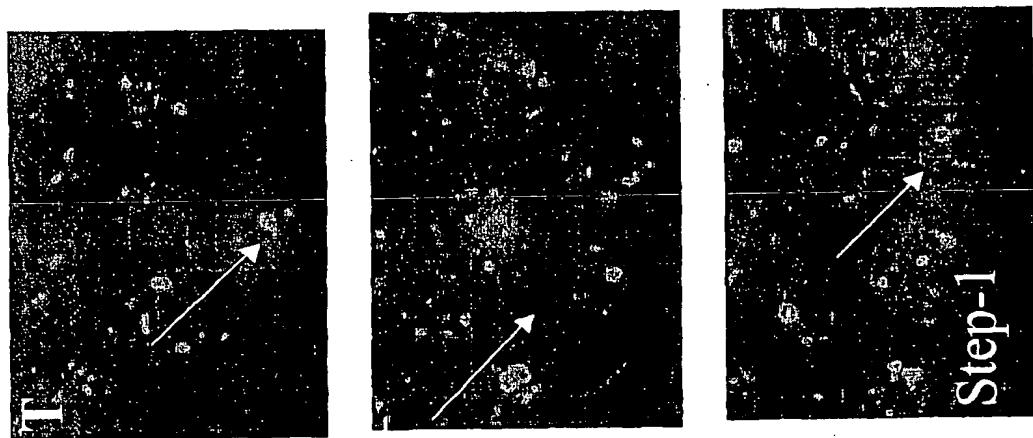
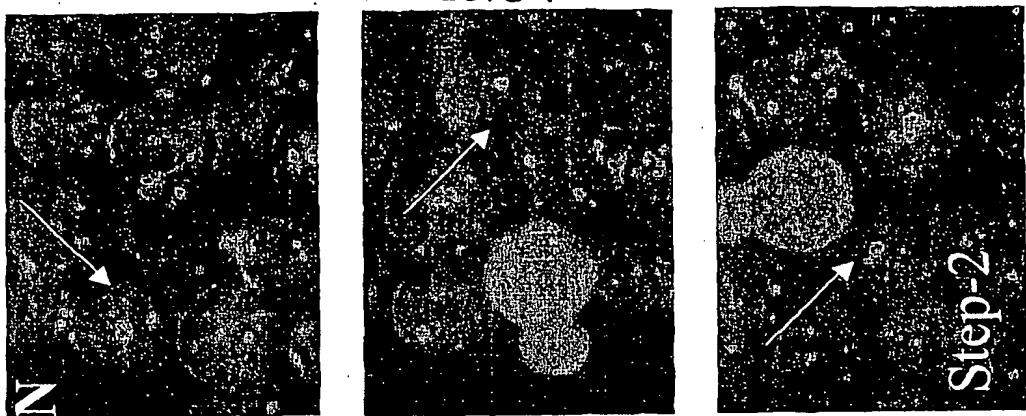


Fig. 6 DNT

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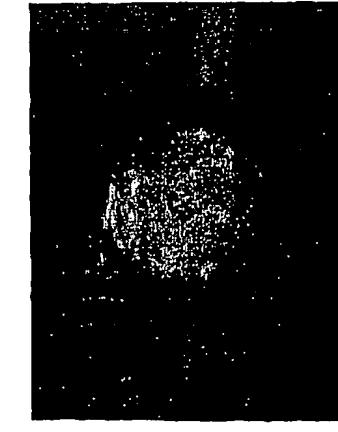
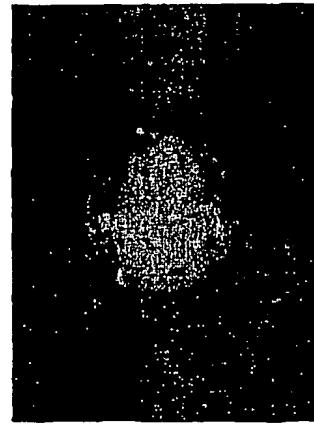
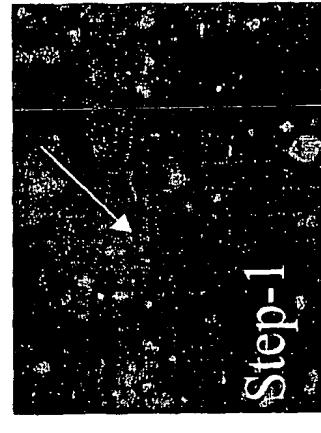
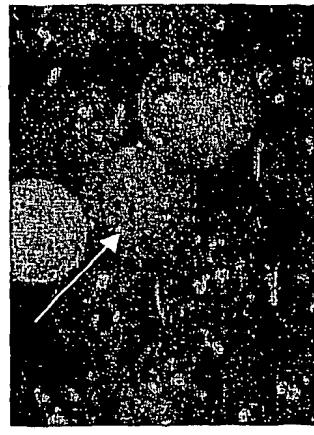
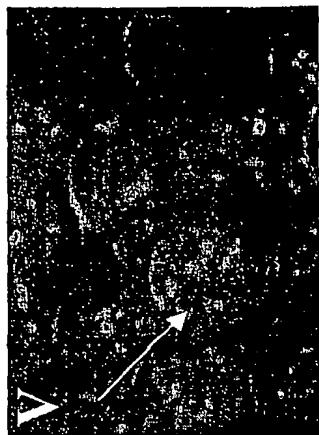


Fig. 6 E VG

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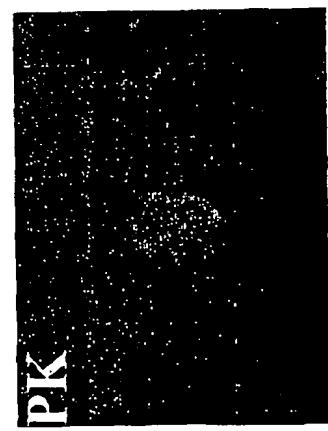
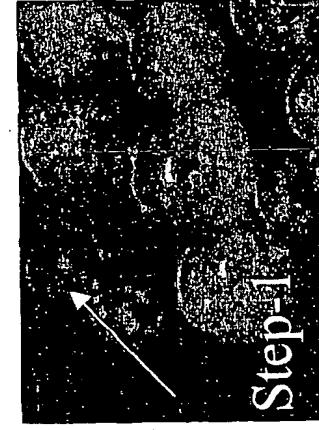
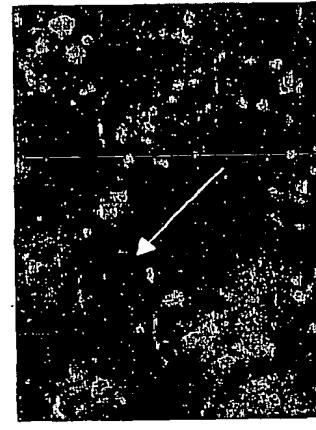
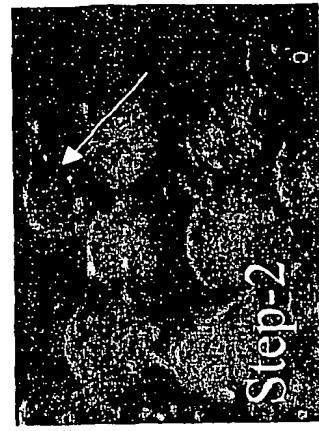
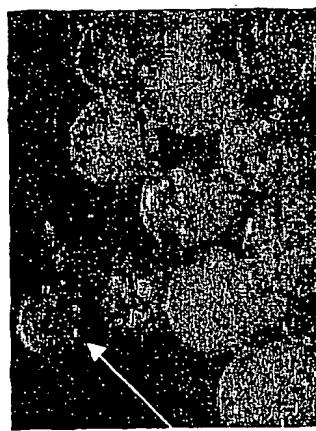
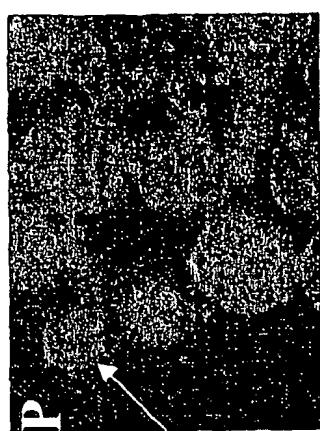


Fig. 6 FPK

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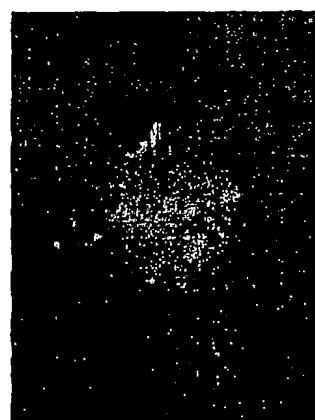
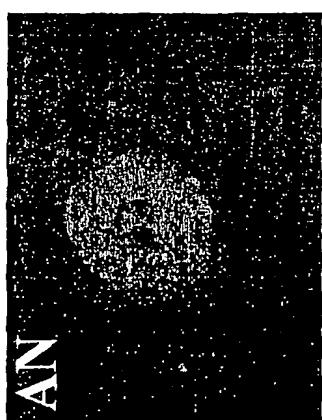
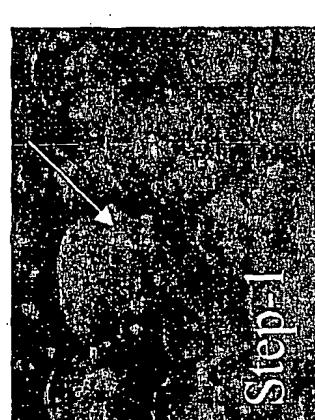
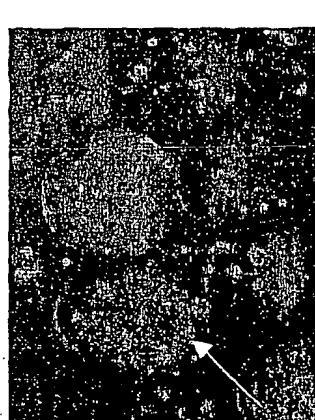
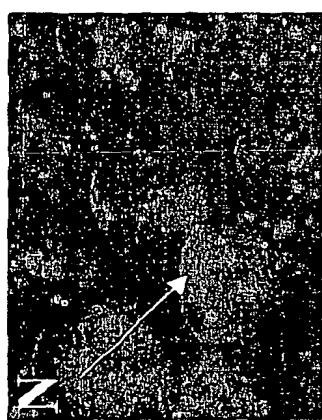
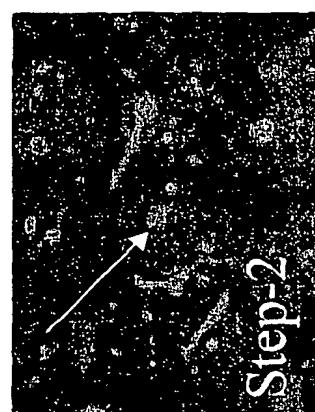
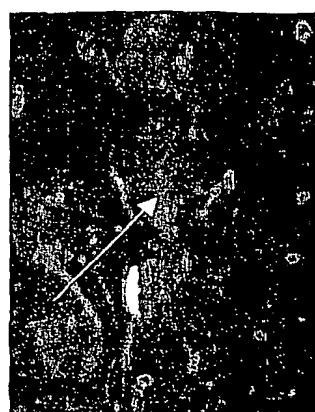
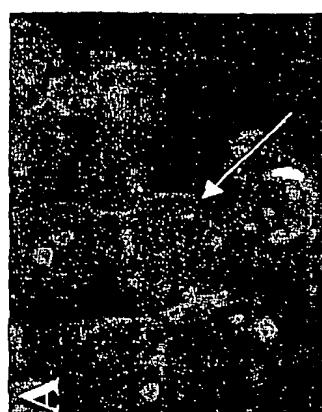


Fig. 6 GAN

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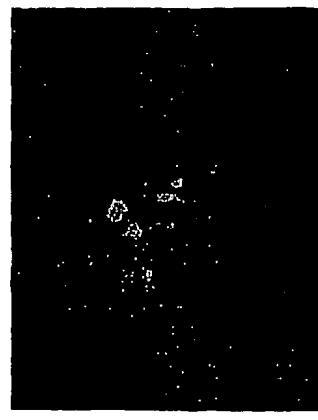
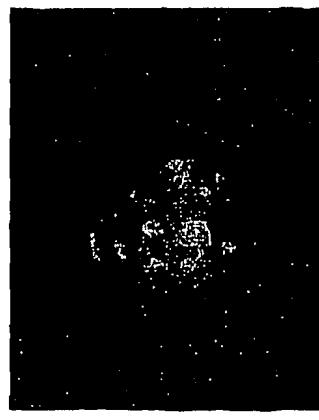
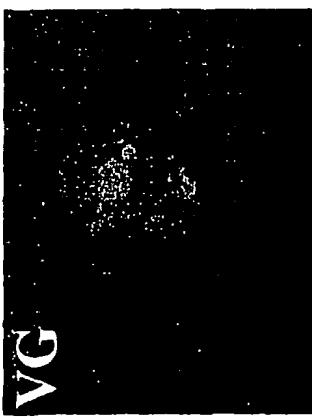
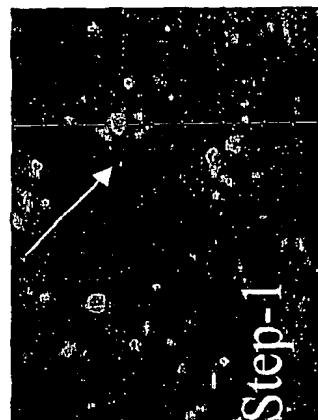
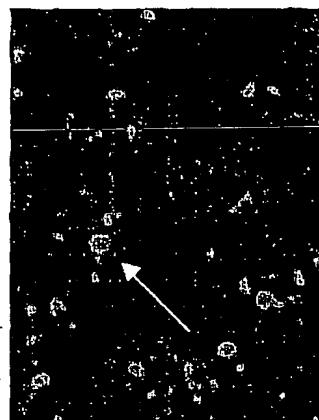
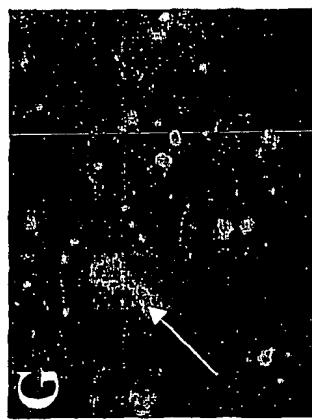
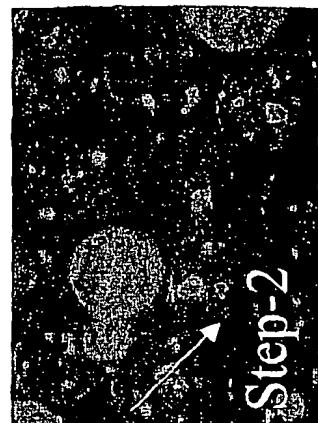


Fig. 6 H VG

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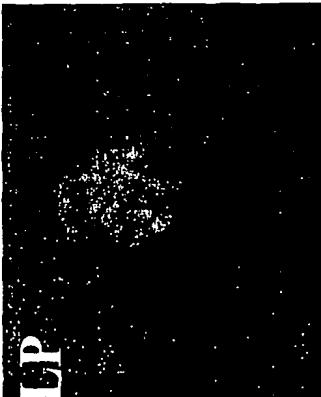
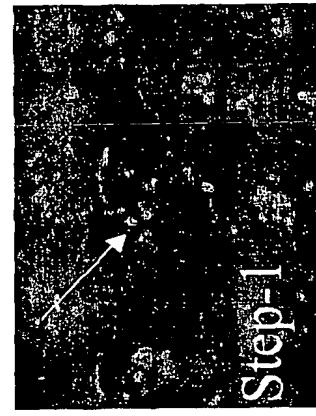
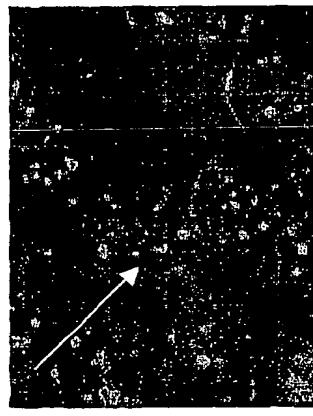
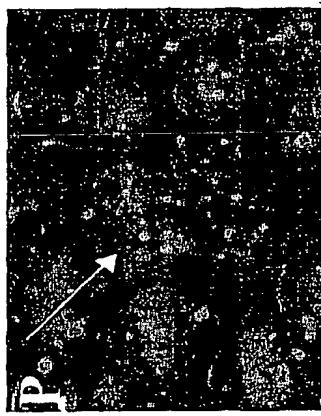
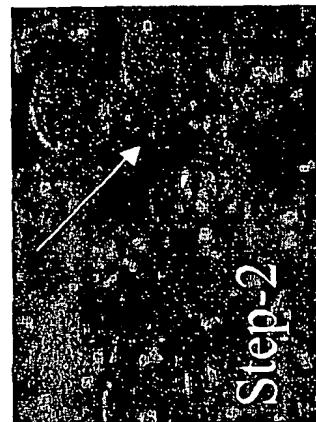
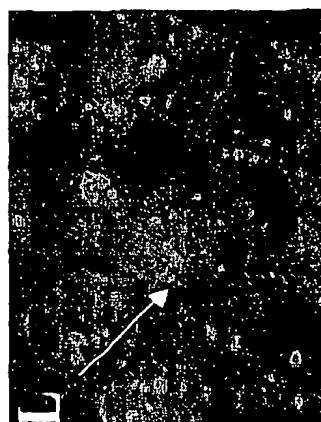


Fig. 6 I LP

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Table 1 Visual decoding of 20 beads from a library containing 400 dipeptides

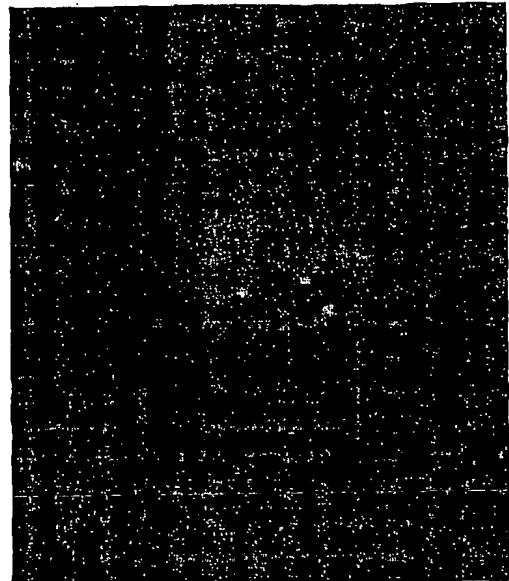
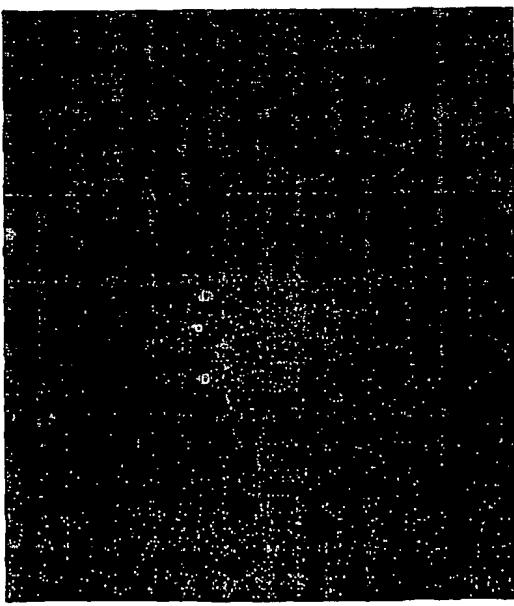
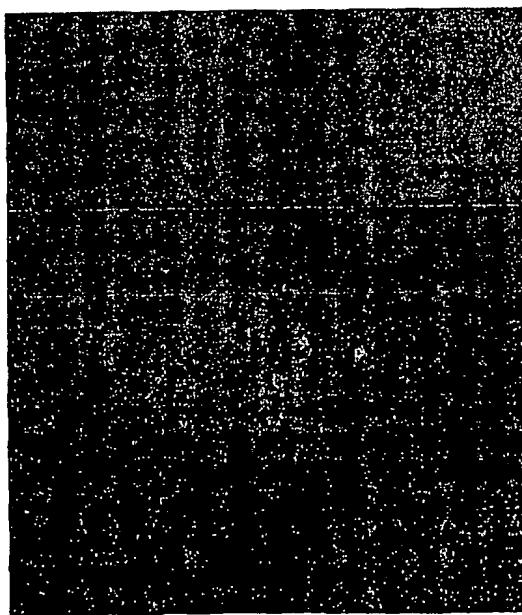
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1	CF	CF	
2	AT	AY	
3	DV	DV	
4	EV	EF	
5	FR	FD	
6	GM	GM	GF
7	IV	IV	IP
8	LP	LP	
9	WG	WW	
10	YW	YW	

	Seq	Pic	Other possible
11	HF	HL	
12	NT	NT	
13	AN	AN	
14	PH	PF	
15	PK	PK	
16	FR	FR	VR
17	VG	VG	
18	RQ	RQ	VQ
19	VG	VG	
20	AL	AL	VL
			AI

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Fig. 7 A 3 Orthogonal pictures

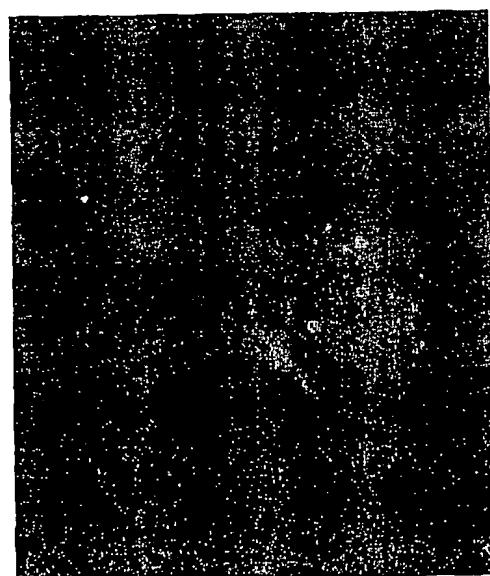
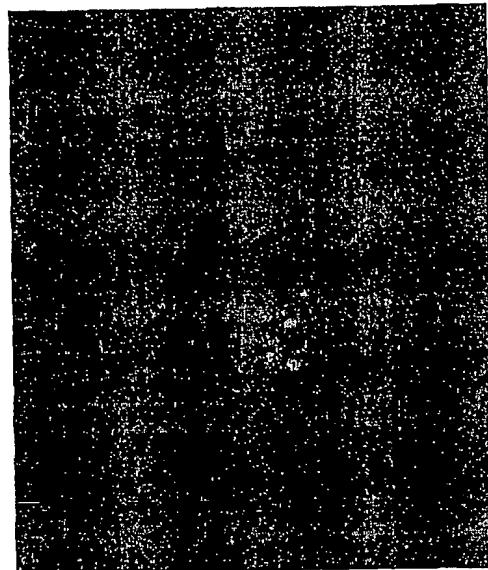
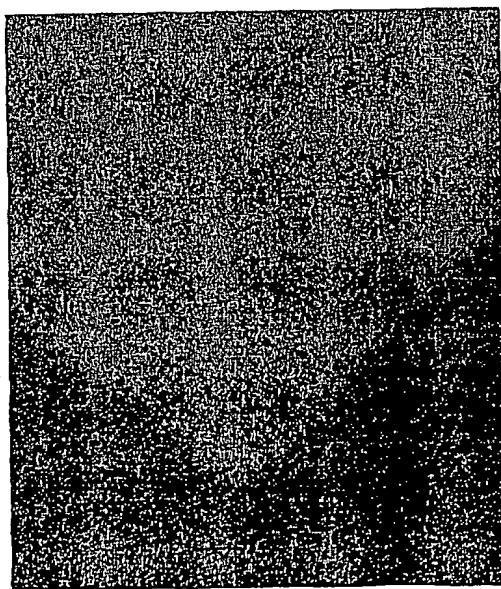
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X1,X2 X1,X2 Y1,Y2
Y1,Y2 Z1,Z2 Z1,Z2



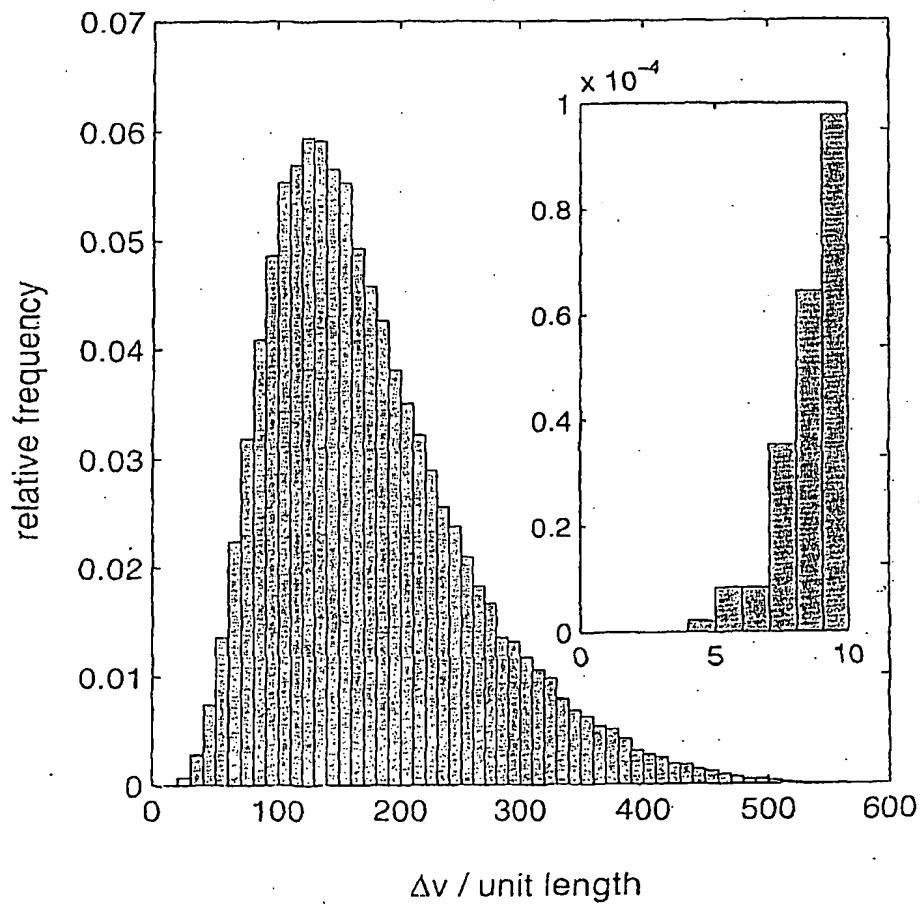
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Fig. 7 B 3 Orthogonal pictures

0,0 0,0 0,0
X1, X2 X1, X2 Y1, Y2
Y1, Y2 Z1, Z2 Z1, Z2



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Fig. 8

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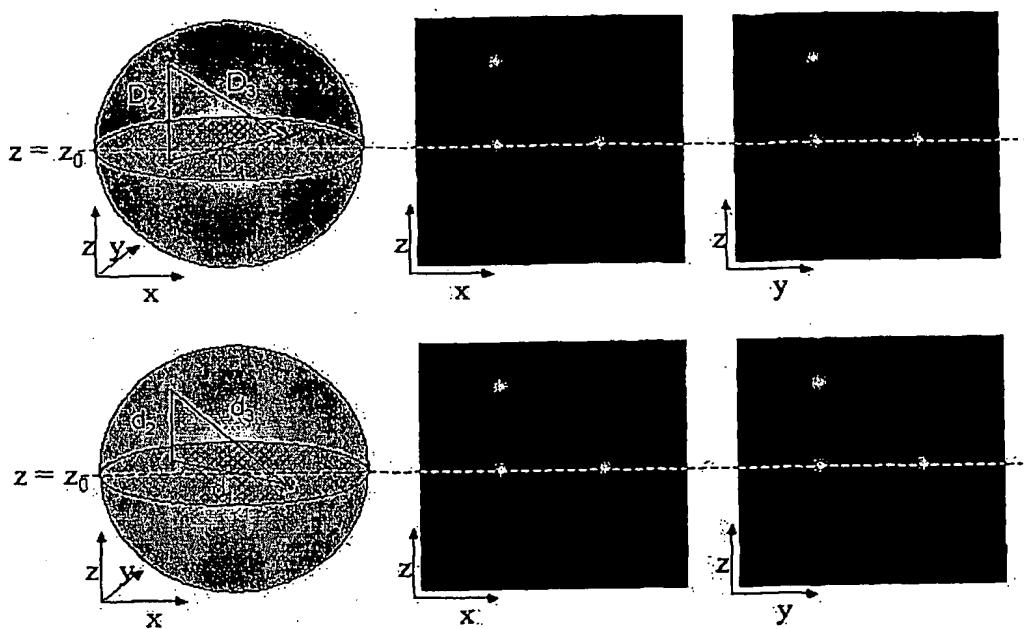


Fig. 9

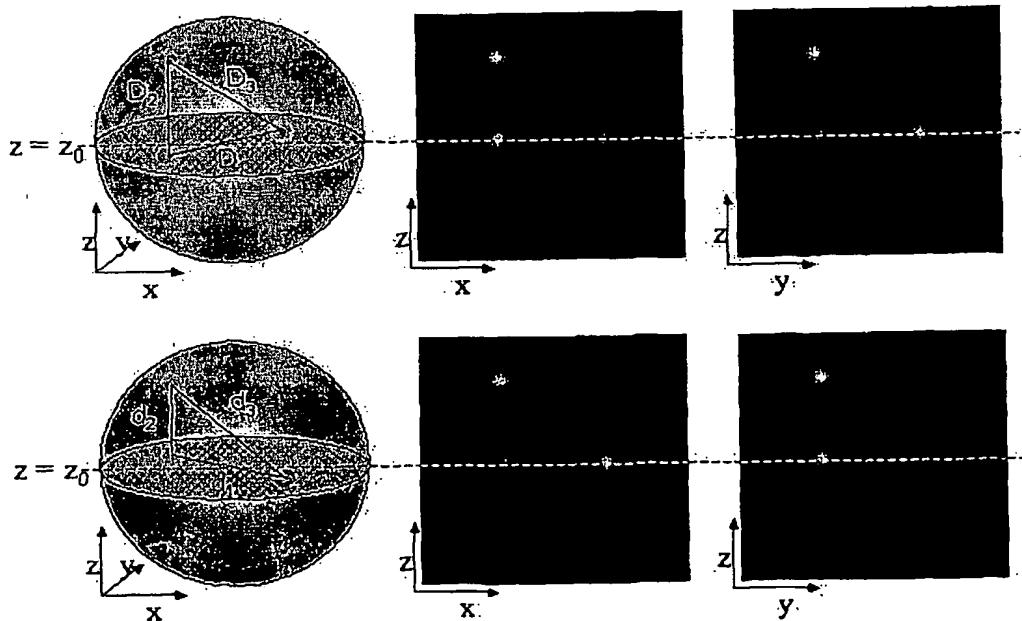


Fig. 10

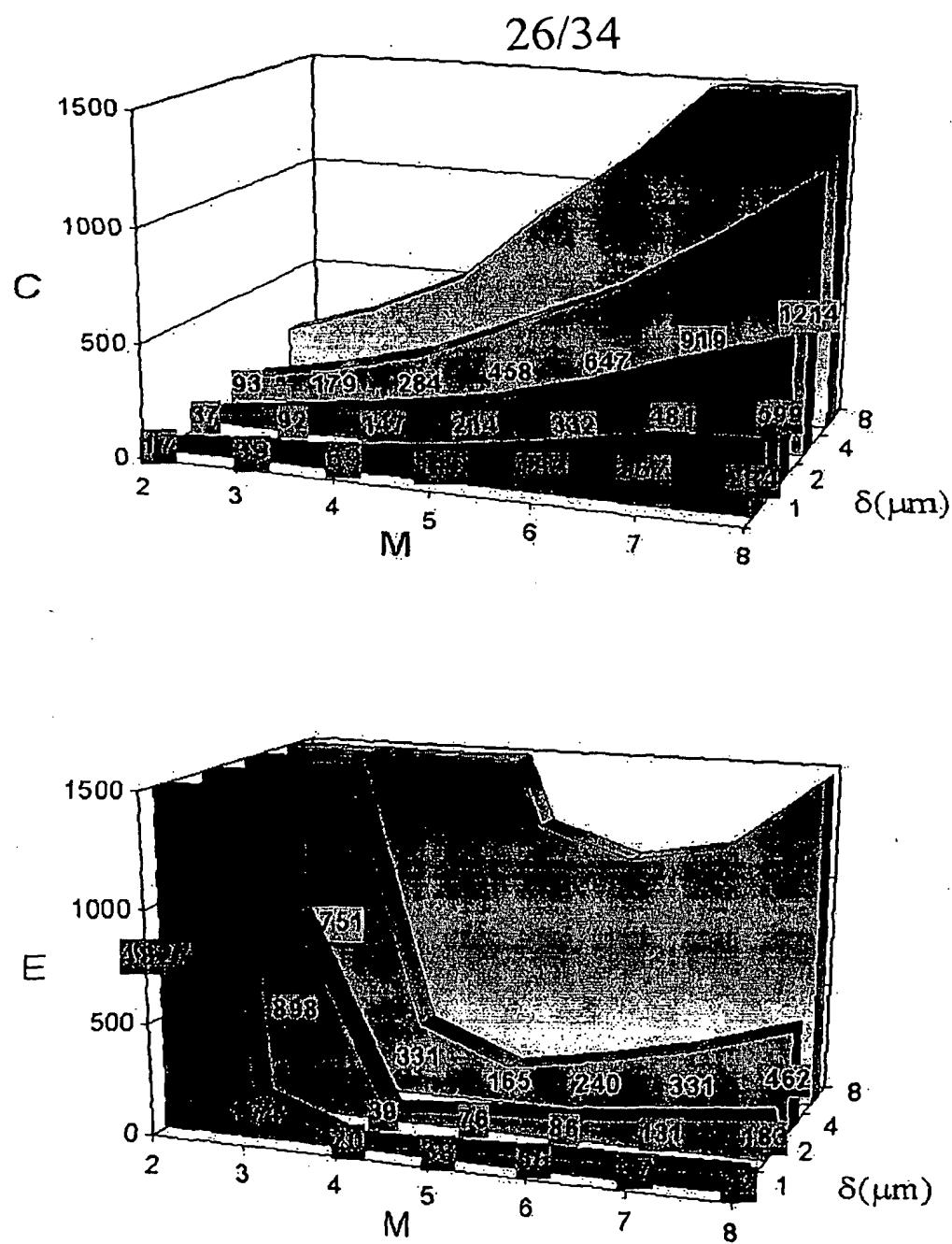


Fig. 11

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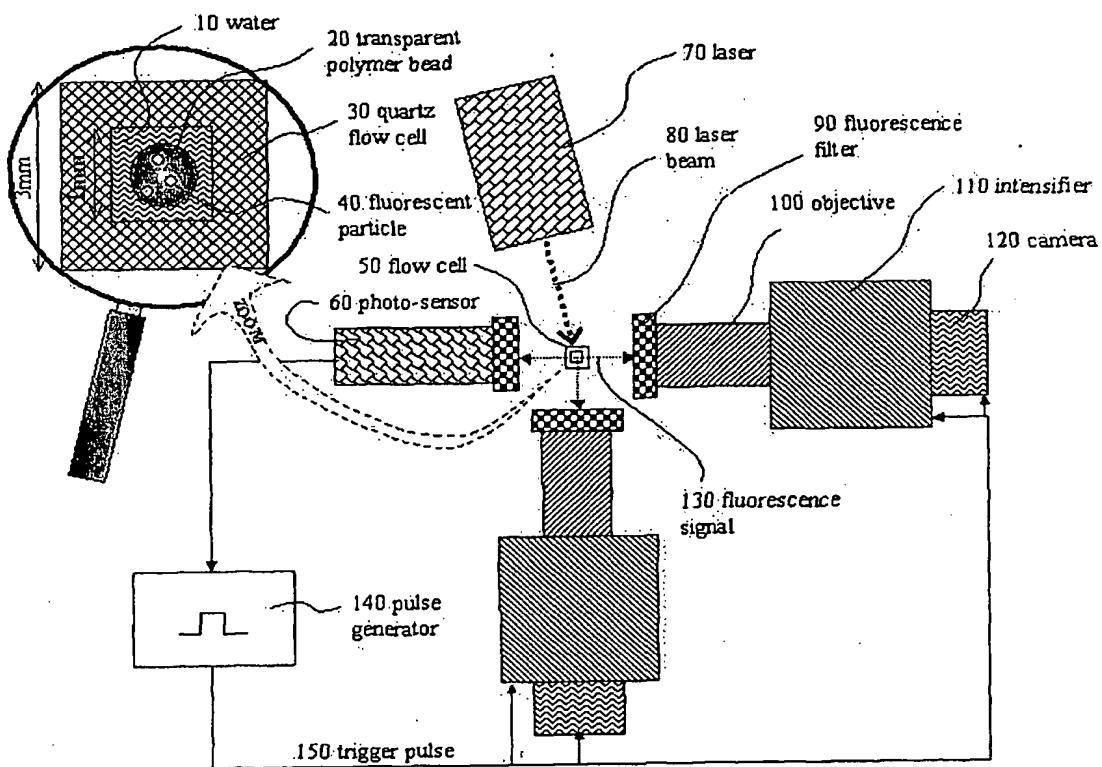


Fig.12

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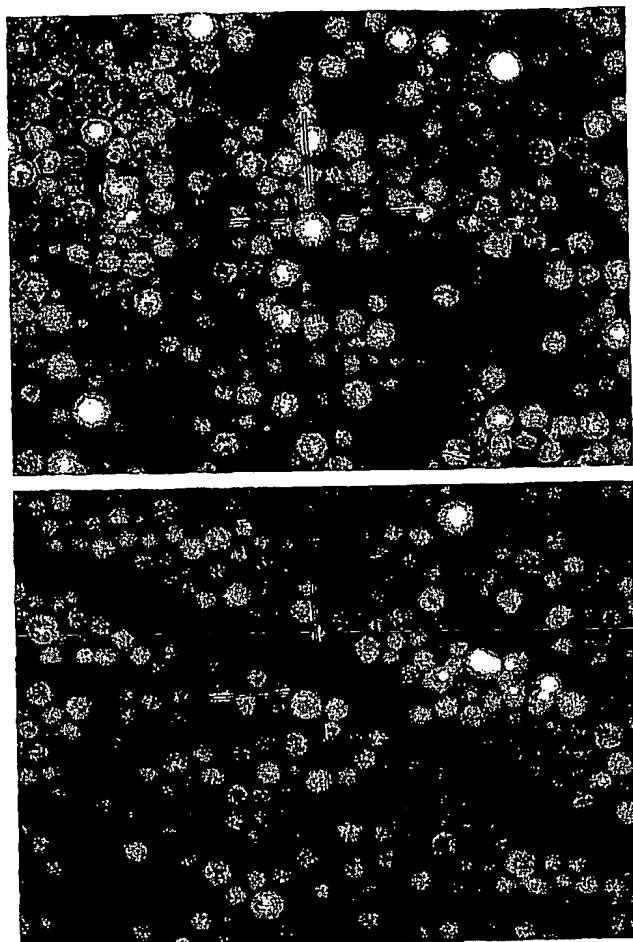


Fig. 13

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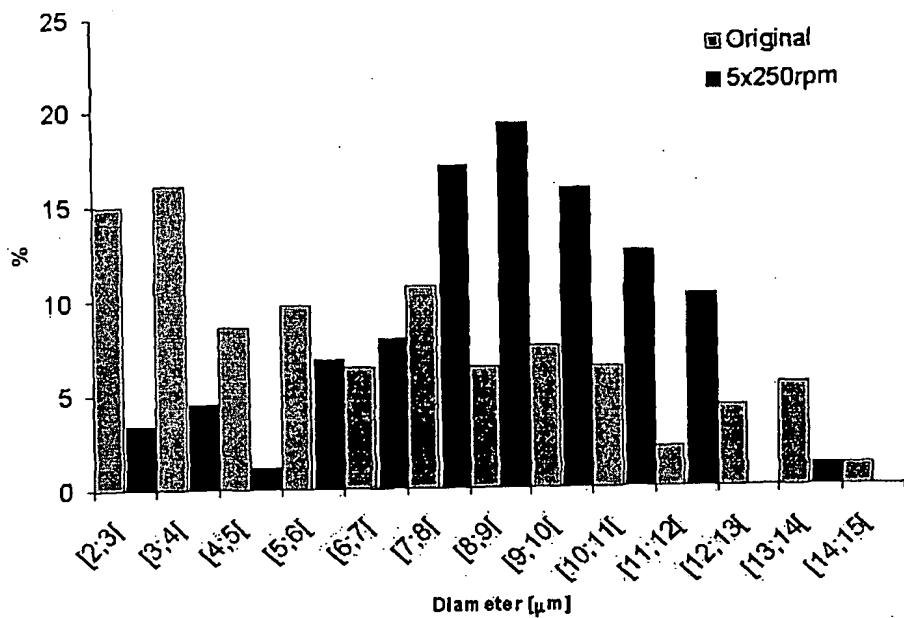


Fig. 14

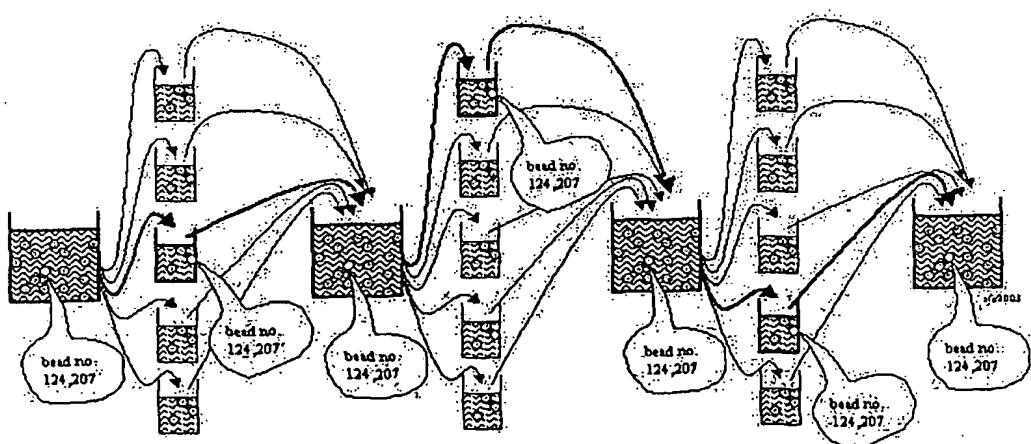


Fig. 15

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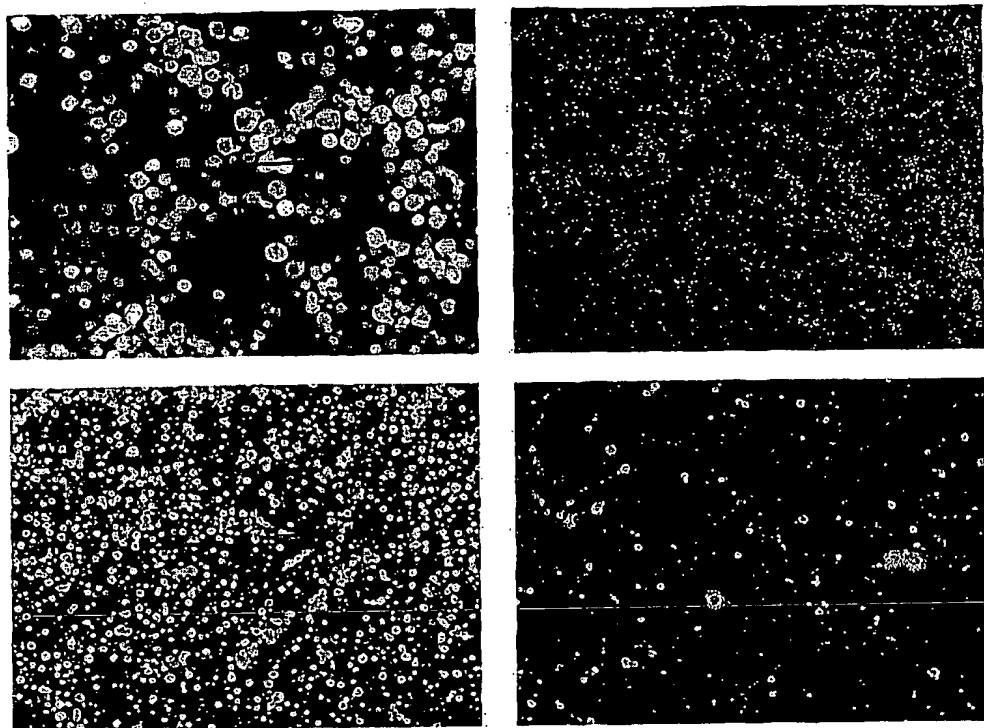


Fig. 16

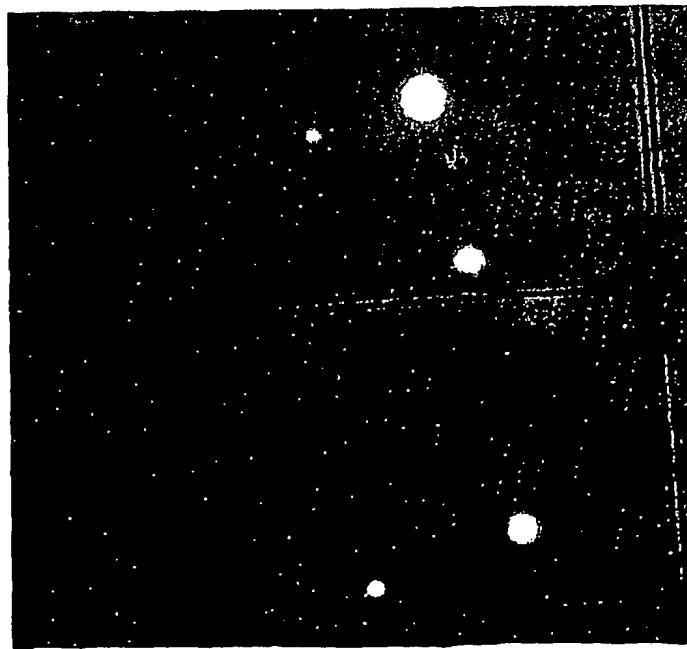


Fig. 17

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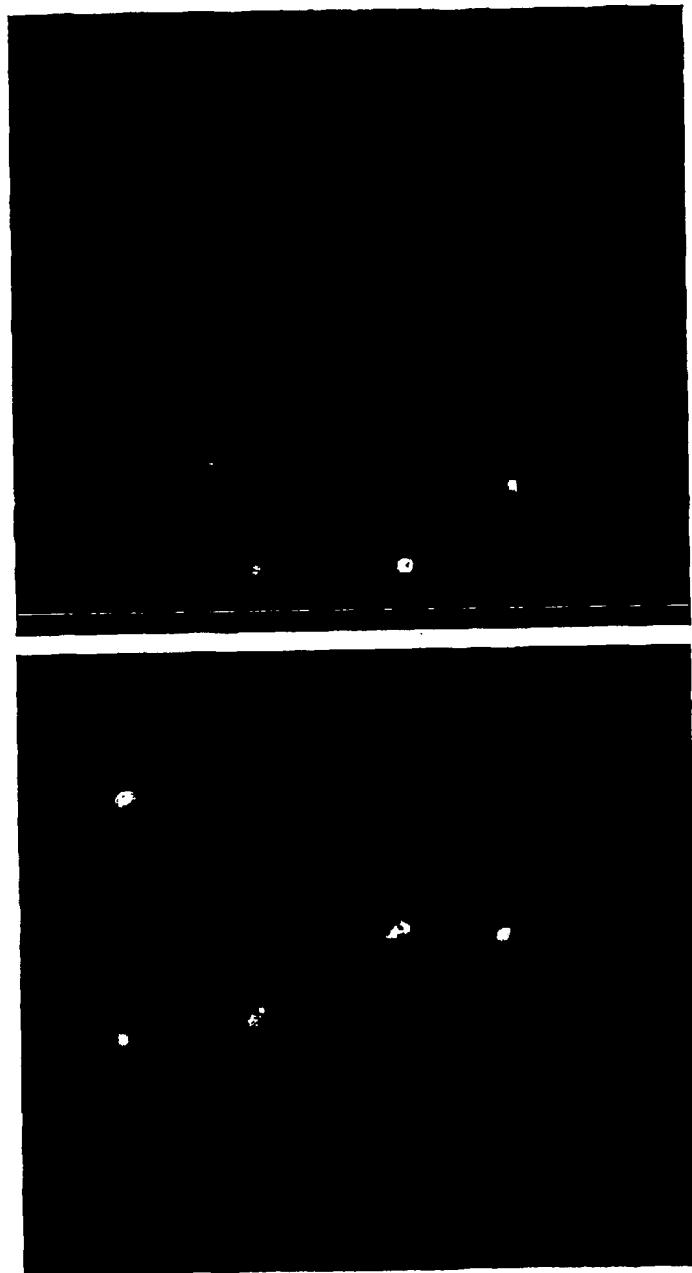


Fig. 18

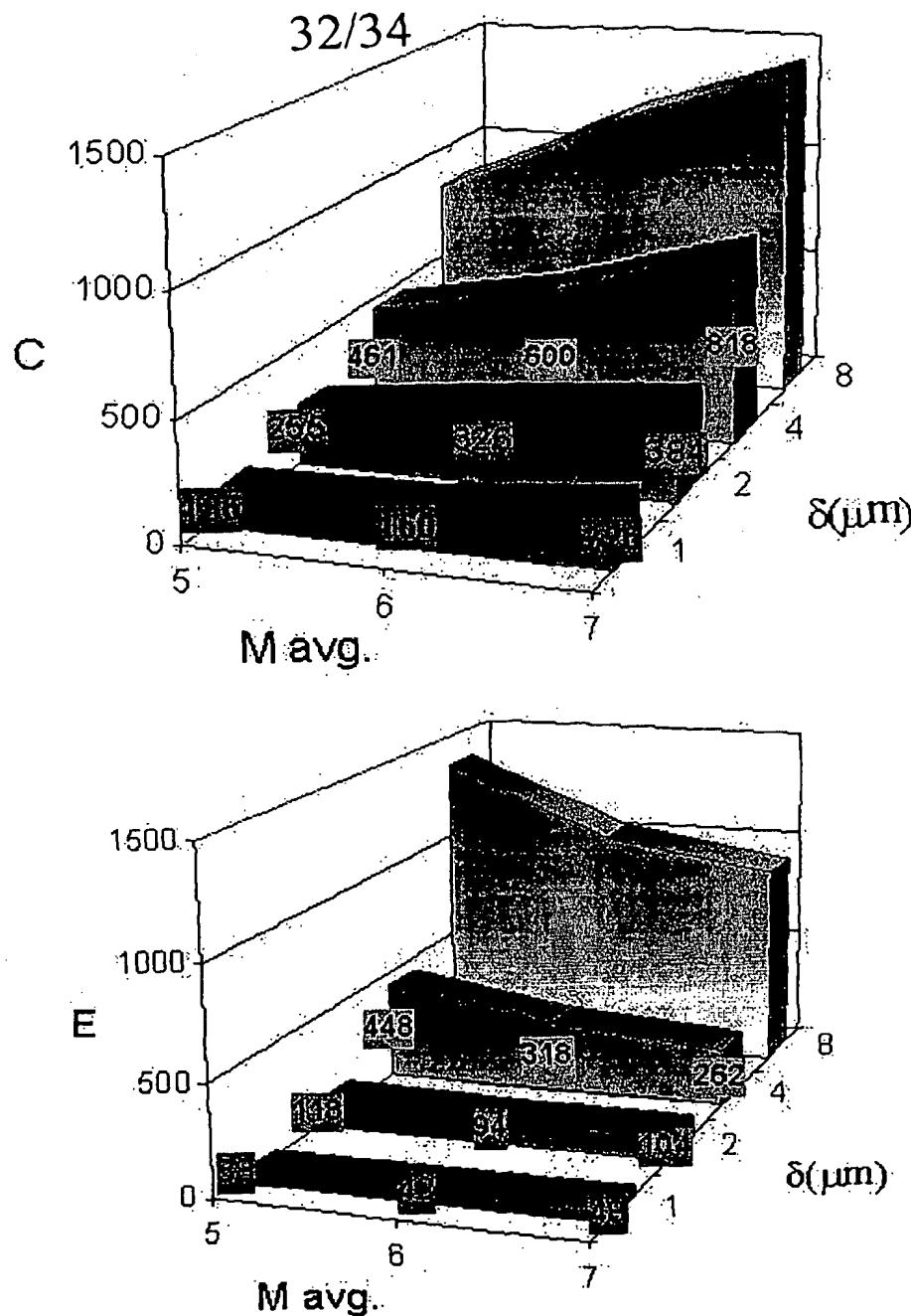


Fig. 19

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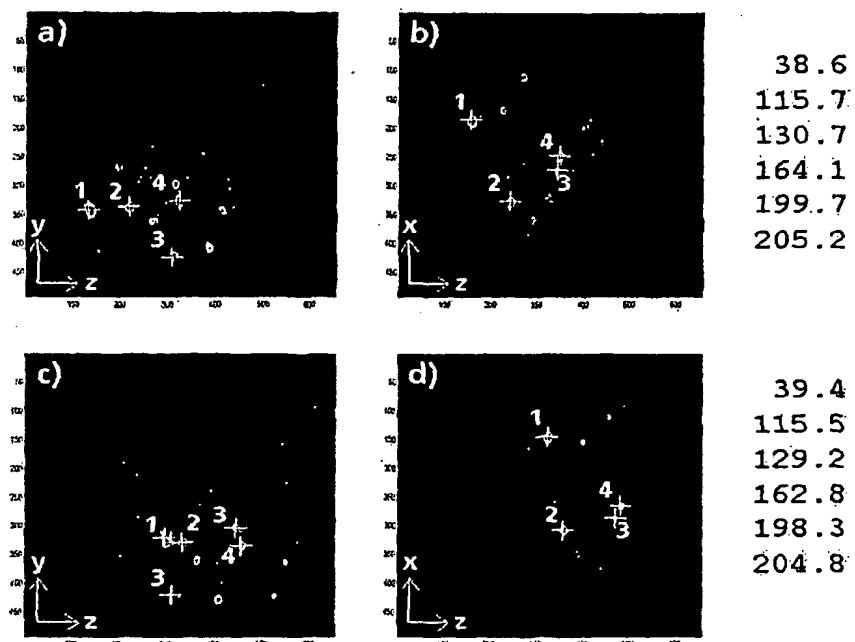


Fig. 20

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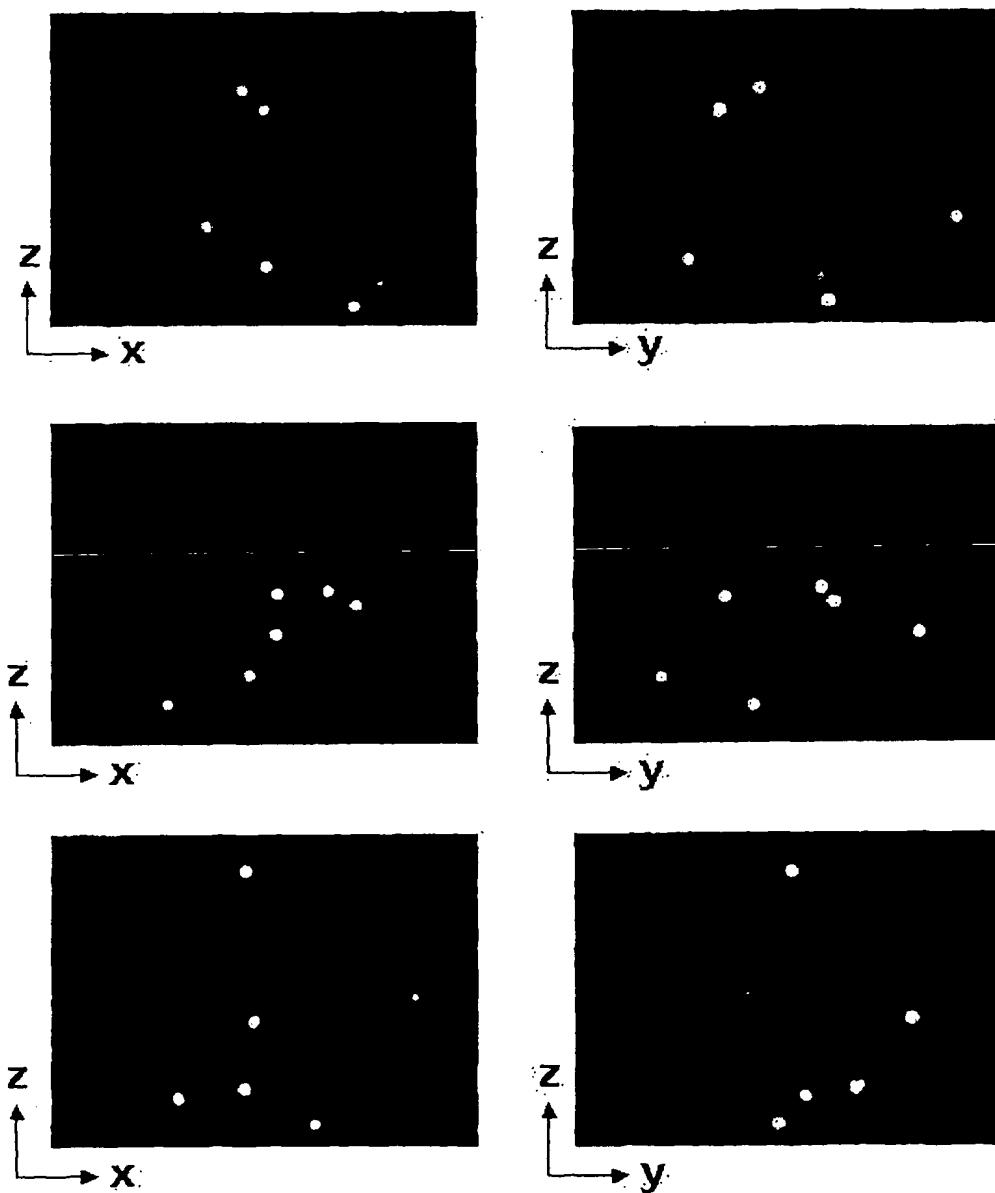


Fig. 21